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AESTRACT

In the spring of 1968 Northern Michigan University and 28 other midwestern colleges and universities participated in a study designed to assess students' perceptions of their campus environment. The study was conducted under the auspices of the Central State Colleges and Universities (CSCU) Cooperative Research Program. Six areas were identified as descriptive of the campus environment: (1) academic environment; (2) facilities and services; (3) cultural climate; (4) communications; (5) community relationships; and (6) ethical and moral values. The inventory that was developed consisted of 150 items, 25 within each of the six areas. Each item describes a condition, practice or circumstance considered by the CSCU committee to be a desirable characteristic of a college or university campus. Respondents were asked to indicate the extent to which they agree or disagree with each statement using the following options: strongly agree, agree, disagree, strongly disagree, and uncertain or do not have adequate information to respond. The results of the study are presented in this document. (Author/HS)

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STUDENT PERCEPTION OF THE CAMPUS ENVIRONMENT

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BY

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OFFICE OF INSTITUTIONAL RESEARCH
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By

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Office of Institutional Research
Northern Michigan University
Marquette, Michigan
December, 1972

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Although I take responsibility for the content of this report, I should like to acknowledge the assistance given by members of the Climate of Learning Committee; particularly that given by Dr. Roger Peterson and Mr. Ronald Stump who reviewed and commented upon a draft of the report. I should also like to acknowledge the Residence Hall Program staff for their assistance in administration of the inventory in the residence halls and the students who participated in the survey.

Kalmer Stordahl

INTRODUCTION

In the spring of 1968 Northern Michigan University and 28 other midwestern colleges and universities participated in a study designed to assess students' perceptions of their campus environment. The study was conducted under the auspices of the Central State Colleges and Universities Cooperative Research Program; major responsibility for all phases of the study was assumed by a committee of ten representatives from CSCU institutions. Dr. H. M. Silvey, Director of Research, University of Northern Iowa was responsible for management of the study. A list of the membership of the study committee is included in the Appendix.

Six areas were identified as descriptive of the campus environment: (1) Academic Environment, (2) Facilities and Services, (3) Cultural Climate, (4) Communications, (5) Community Relationships, and (6) Ethical and Moral Values. The inventory which was developed consisted of 150 items: 25 within each of the six areas. Each item describes a condition, practice or circumstance considered by the CSCU committee to be a desirable characteristic of a college or university campus.[1] Respondents are asked to indicate the extent to which they agree or disagree with each statement using the following options: strongly agree, agree, disagree, strongly disagree, and uncertain or do not have adequate information to respond.

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[1]Inventory statements may be found in Table 7. Some readers will not agree that all the statements describe desirable characteristics, nor was there always unanimous agreement among members of the committee.

The six areas included in the inventory are defined as follows:[2]

I. Academic Environment. This area is concerned with the setting, personnel, and conditions conductive to learning and intellectual development. The 25 statements dealing with the area emphasize competent instruction, high academic standards, respect for scholarship, and pride in high intellectual achievement. The institution is characterized by an atmosphere of academic excellence with high type instruction and with good opportunities to learn.

II. Facilities and Services. The educational program of the institution is implemented by certain facilities and services. It is unlikely that a student enrolled for some time on campus will be unaware of the things to work with and the services provided. Classrooms, library resources, instructional materials, food and housing, recreational opportunities, and custodial services all are examples that make up Area II.

III. Cultural Climate. The area of cultural climate refers to conditions and resources which stimulate and cultivate the intellectual and emotional sensitivities of the individual, and which in turn produce appreciation and satisfaction. Cultural factors have been sometimes referred to as "the finer things of life." Art, music, dramatics, lecture-concert programs, museum collections, and literature are examples of factors in the cultural climate area.

IV. Communications. The art of communication has been much discussed during the late 60's as one of the main factors which determined harmony, tranquility, and academic excellence and general social progress on the campus. The absence of proper or few communication lines has contributed much to resentment, disrespect for higher education, disdain for educational programs, and even lawlessness on the campus. It is presumed that no situation exists where no lines or avenues of communication exist. There is not total misunderstanding. This area provides opportunity to identify and evaluate various procedures and practices by which individuals of the college and university community relate to and understand each other: student to student, student to faculty and all to academic government and institutional management.

V. Community Relationships. A community is more than territory; it includes people. To describe or define any kind of community action or relationships one must assume some form of communications; some kind of conscious interchange. This area presupposes the relating of experiences and interchange, and with the community extending beyond campus boundaries including people and territory contiguous with the campus. The student becomes a part of this community and soon is able to register his reactions to it.

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[2]H. M. Silvey, Campus Environment Study, University of Northern Iowa, 1971.

VI. Ethical and Moral Values. Conscious acts and general conduct are directed by inner feelings, opinions, prejudices, and judgment. Every act and expression by self and others is judged in terms of right and wrong and appropriateness by the observer. Actions and standards involving ethical and moral values on a campus come soon to the attention of every student. His own actions and assessments become a part of the corporate behavior on campus. He does have judgments and reactions regarding value standards.

GENERAL PROCEDURE

In the spring semester of 1972 the inventory used in 1968 was administered to a new sample of Northern Michigan University undergraduate students. The objective was to obtain a current assessment of students' perceptions of the campus environment and to compare that assessment with the opinions held by students in the spring of 1968.

Samples

In 1968 the inventory was completed by approximately 665 Northern Michigan University undergraduates or about 12 percent of the undergraduate enrollment on the Marquette Campus. The inventory was administered to intact classes, primarily lecture sections of Social Science and Humanities courses. Upper division students were somewhat overrepresented and lower division students somewhat underrepresented in the resulting sample.

In 1972 the inventory was distributed by mail to a proportionate stratified random sample of 832 students or about 13.5 percent of the undergraduate students registered full time on the Marquette Campus. Strata used in sampling were class, sex, and living arrangement (in a residence hall or not in a residence hall). Usable returns were received from 543 students or about two-thirds of those to whom inventories were sent. The 543 respondents constituted about nine percent of the population sampled.

Scoring the 1972 Inventory

The 1972 student responses were scored in a manner similar to that used for the CSCU study in 1968 in order to make comparisons with the 1968 study possible. A weighted average score was obtained for each student on each of the six areas of the inventory. The score for each area was obtained by summing the item response weights for the 25 items of each area and dividing the resulting sum by the number of items (25) to obtain a weighted average item score. The weight assigned to each response was as follows:

Strongly Agree	=	+100
Agree	=	+ 50
Disagree	=	- 50
Strongly Disagree	=	-100
Uncertain (no opinion)	=	0

RESULTS

Before presenting the results of the study some precautions as to the validity of the inventory seem appropriate. Since the inventory has had limited use and no empirical evidence of its validity is available, its worth must be judged on item content and scoring procedures.

Perhaps the most important assumption made in deriving a score for each area of the inventory is that each statement describes a desireable characteristic of a college or university so that a high score denotes a good environment. The reader is urged to examine the items reproduced in Table 7 and judge for himself the validity of this assumption. Some readers will not agree that all of the items describe characteristics which are desireable for Northern Michigan University, although they may be important to some institutions and to some persons at any institution. To cite one example, some readers will probably feel that a number of items erroneously assume the desireability of what is sometimes called a

"collegiate" philosophy of education; that is, the point of view that extracurricular activities, living-group functions, athletics, social life, fraternities and sororities, rewarding friendships, and loyalties to college traditions, as well as academic activities, are an important part of ones college experience and essential to the cultivation of a well-rounded person. It is quite likely that not all readers or students subscribe to this point of view.

Another limitation of the area scores is the relatively diverse nature of the items included in some of the areas. The Facilities and Services area, for example, includes items on academic and nonacademic facilities and a wide range of services so that a single total score is probably not very meaningful. An examination of the items will show that this diversity holds to a greater or lesser degree for each of the areas included in the inventory.

As already noted, all items are stated in what is assumed to be a positive or desireable direction. The effects of this format upon students' responses is unknown, but it is quite likely that a somewhat different picture of the campus environment would have been obtained had a different item format been used.

Because of these and other limitations of the six area scores that may occur to the reader, the most useful information is probably the item response data reported in Table 7. The reader can select from that table those items which are of interest and significance to him.

In spite of the limitations of the area scores, they are reported (albeit with some trepidation) to provide at least a rough comparison of students' views in 1968 and 1972. Item by item comparisons were not made between 1968 and 1972 because item response data were not readily available for the 1968 survey.

Changes in Perception, 1968 to 1972

How did students' perceptions of the campus environment in 1972 compare with their perceptions in 1968? Information relevant to this question is summarized in

Figures 1 and 2. Figure 1 provides a comparison of weighted average scores on each area of the inventory, and Figure 2 provides similar information in terms of the percent of positive or agree (strongly agree plus agree) responses given by students to the inventory items.

In the spring of 1972 the average ratings of Northern students were slightly higher than in 1968 in three of the areas, namely Facilities and Services, Cultural Climate, and Community Relationship; and slightly lower in the Academic Environment, Communications and Ethical and Moral Values areas. Note that the largest gain was in the Facilities and Services area; this gain was undoubtedly influenced by the addition of the Learning Resources Center and Instructional Facility building since 1968. Whether these changes can be considered statistically significant is not known as the data available from the 1968 survey did not permit calculation of a significance test. All observed changes were relatively small, however, and as can be seen from Figure 1 the general pattern of scores was remarkably similar in 1968 and 1972.

Relationship of Perceptions to Class, Sex, and Residence

Weighted average scores by class, sex, and residence for each area of the inventory are given in Tables 1 through 6 for the spring semester of 1972. The weighted average scores were analyzed for class, sex, and residence differences by analysis of variance. The resulting analysis of variance tables are included in the Appendix.

The difference in scores among classes was significant for all six areas of the inventory. In all cases the freshmen expressed the most favorable reactions to the inventory items and juniors the least favorable. The sequence by class of average ratings on all scales from high to low was: freshmen, sophomores, seniors, juniors. The sequence in 1968 was similar except that the seniors rather than the juniors consistently expressed

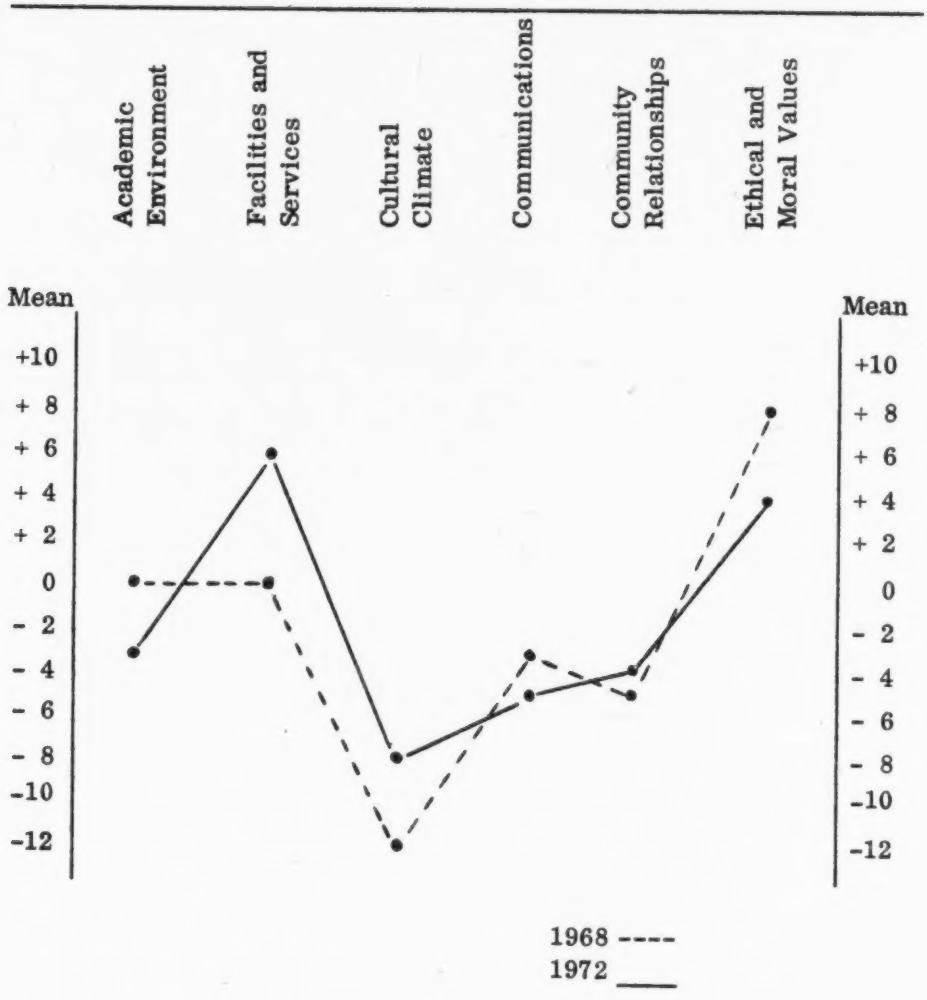

Figure 1. Average (mean) ratings for each area of the inventory, 1968 and 1972.

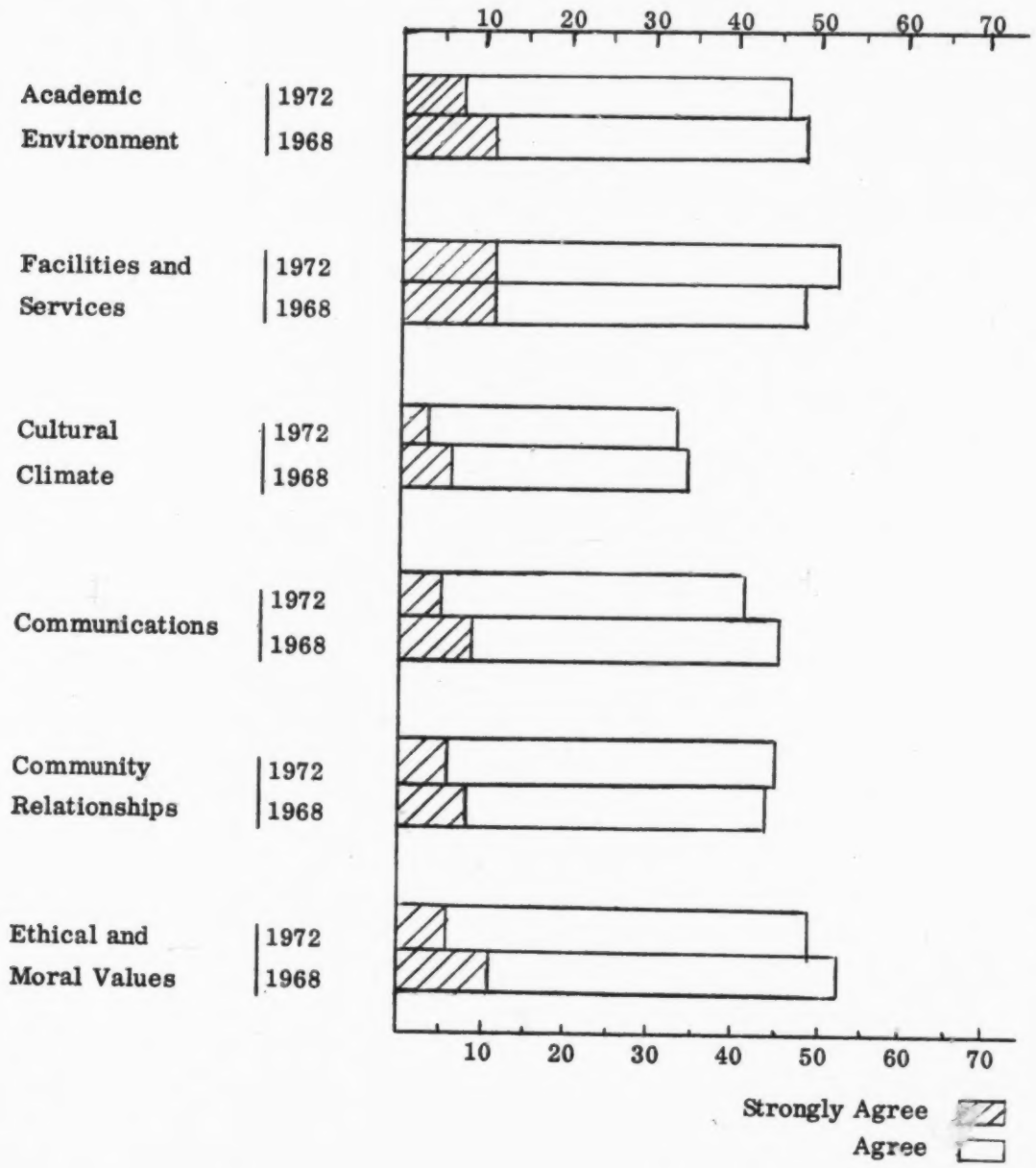

Figure 2. Percent of agree responses on each scale.

Table 1. Mean Scores on the Academic Environment Scale

	Men			Women			Total		
	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total
Fr	3.02	8.40	5.01	.79	2.67	1,13	1.66	6.25	2.90
So	2.33	9.27	4.72	-7.21	3.08	-5.18	-2.99	6.97	-.31
Jr	-11.92	-9.27	-10.25	-12.65	2.48	-7.17	-12.36	-5.29	-8.80
Sr	.78	-8.98	-6.44	-6.50	-8.35	-7.49	-3.05	-8.78	-6.84
Total	-.15	-2.65	-1.44	-4.86	-.69	-3.67	-2.90	-1.98	-2.53

Table 2. Mean Scores on Facilities and Services Scale

	Men			Women			Total		
	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total
Fr	7.45	16.00	11.36	10.05	14.33	10.85	9.03	16.63	11.08
So	4.95	7.64	5.88	1.25	5.54	2.09	2.88	6.86	3.95
Jr	5.33	.49	2.28	-1.57	3.81	.38	1.15	1.61	1.38
Sr	4.11	5.57	5.19	-2.30	4.09	1.12	.74	5.11	3.63
Total	5.85	7.03	6.46	4.00	6.72	4.77	4.77	6.92	5.64

Table 3. Mean Scores on the Cultural Climate Scale

	Men			Women			Total		
	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total
Fr	-10.04	2.87	-5.26	-2.79	-.22	-2.31	-5.63	1.71	-3.65
So	-7.00	-3.00	-5.63	-8.79	10.77	-4.94	-8.00	2.11	-5.28
Jr	-18.50	-17.27	-17.72	-13.95	2.86	-7.86	-15.74	-10.45	-13.07
Sr	-16.33	-10.35	-11.91	-10.60	-8.44	-9.44	-13.32	-9.76	-10.96
Total	-11.44	-8.44	-9.89	-7.48	.03	-5.35	-9.13	-5.54	-7.68

Table 4. Mean Scores on the Communications Scale

	Men			Women			Total		
	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total
Fr	.86	3.00	1.65	1.60	12.00	3.53	1.31	6.38	2.67
So	-4.10	-4.73	-4.31	-2.15	.77	-1.58	-3.01	-2.69	-2.92
Jr	-18.00	-21.17	-20.00	-15.35	.48	-9.62	-16.39	-13.84	-15.11
Sr	-11.56	-8.98	-9.65	-12.00	-4.35	-7.91	-11.79	-7.54	-8.98
Total	-5.69	-9.31	-7.56	-4.21	1.81	-2.50	-4.83	-5.50	-5.10

Table 5. Mean Scores on the Community Relationships Scale

	Men			Women			Total		
	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total
Fr	-1.06	4.93	1.16	3.44	8.78	4.43	1.68	6.38	2.94
So	-7.38	-.09	-4.88	1.96	6.77	2.91	-2.17	2.46	-.92
Jr	-16.33	-16.29	-16.31	-14.87	-1.81	-10.14	-15.44	-11.39	-13.40
Sr	-5.00	-5.29	-5.22	-11.00	-8.44	-9.63	-8.16	-6.27	-6.91
Total	-6.27	-5.50	-5.87	-2.09	.18	-1.44	-3.83	-3.55	-3.72

Table 6. Mean Scores on Ethical and Moral Values Scale

	Men			Women			Total		
	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total	Dorm	Non Dorm	Total
Fr	7.92	15.07	10.57	8.05	11.78	8.74	8.00	13.83	9.57
So	1.14	5.55	2.66	4.98	10.77	6.12	3.28	7.49	4.42
Jr	-2.83	.05	-1.02	-6.05	2.76	-2.86	-4.79	.97	-1.89
Sr	2.89	6.47	5.54	-7.00	-1.04	-3.81	-2.32	4.14	1.95
Total	3.23	6.29	4.81	2.84	5.15	3.49	3.00	5.90	4.17

the least favorable reactions to their experiences at Northern. These differences were not unexpected, as similar studies at Northern and at other institutions have typically found freshmen to express the most positive views toward their college experiences with this initial enthusiasm followed by a "sophomore slump".[3] In the present study this decline seems to have been postponed to a "junior slump". Feldman and Newcomb[4] have summarized some of their findings on changes in college students from the freshman through seniors years as follows:

> "Our scattered evidence about year-to-year changes in adaptation to college experiences provides few surprises. Freshman who have arrived with unrealistic and exaggerated notions about college tend, after a year or so, either to drop out or to recover from their anticipatory excitement, with the not uncommon consequence of a sophomore slump. By this time they have also come to accept more or less realistic levels of academic aspiration. For the next year and a half or so, their interpersonal goals and satisfactions--aspirations toward which are less readily fixed--loom large. Seniors, by now less naive and more oriented toward 'the real world outside,' typically begin to disengage themselves from the college as an institution as they look forward to personal and vocational careers. Such changes are almost foreordained by the uniqueness of the college as a temporary arrangement for socializing young people, together with the inexorable demands of the human life cycle."

A possible alternative explanation of the class differences which should not be overlooked is response "set" or response bias. Feldman and Newcomb[5] have reported a tendency for upperclassmen to disagree more often than lowerclassmen regardless of item content when asked to respond on a strongly agree - strongly disagree continuum in an attitude study. The reader will recall that disagreeing with statements in the Campus Environment Iventory results in a low score.

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[3]A number of related studies are summarized in Feldman, K.A. and Newcomb, T.M. The Impact of College on Students: San Francisco, Jossey-Bass, 1969, pp. 70-105. See also: Stordahl, K. Student Satisfaction with Northern Michigan University, Office of Institutional Research, 1969.

[4]Feldman and Newcomb, op. cit. p. 103.

[5]Feldman and Newcomb, op. cit. p. 354

Women expressed more positive views of the University than did the men in three of the six areas covered by the inventory: Cultural Climate, Communications, and Community Relationships. These differences were quite small, however, (statistically significant at the .05 level only). No significant differences were evident between men and women in the Academic Environment, Facilities and Services, and Ethical and Moral Value areas.

In no instance was any statistically significant difference found between the students who lived in a residence hall and those who did not. There was some tendencey, however, for students who lived off campus to view most aspects of the University environment more favorably than those who lived in residence halls. The one exception was the Communications area; students who lived on campus felt lines of communication among students, faculty and administration were slightly more adequate than did students living off campus.

Description of the University Environment, 1972.

The percent of students who responded positively (either strongly agree or agree), negatively (disagree or strongly disagree) or gave no opinion to each item of the inventory is given in Table 7.[6] Column four of Table 7 gives the percent of the positive responses when students who expressed no opinion on a given item were eliminated from the analysis; that is, percents were calculated only upon those who selected one of the agree or disagree options. This procedure substantially increased the percent of positive and negative responses on a few items since a rather large number of students expressed no opinion on them. An examination of Table 7 provides more specific and perhaps more valid information on students' assessment of the campus environment than do the over-all average scores on each area of the inventory.

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6. Computer printouts of similar information by sex, class, and residence (on or off campus) may be borrowed from the Office of Institutional Research.

Table 7. Percent of Agree (Strongly Agree + Agree), Disagree (Strongly Disagree + Disagree), and No Opinion Responses for the 1972 Sample.

Agree	Disagree	No Opinion	Agree*		Statement
					ACADEMIC ENVIRONMENT
47	50	3	48	1.	There is much more emphasis directed toward understanding than upon memorization of fact in most classes.
53	42	5	56	2.	Most instructors are very thorough in the teaching of their subject matter.
48	42	11	53	3.	Students are generally aware that several instructors are engaged in scholarly research and other creative work.
26	70	3	27	4.	Stimulating classroom discussions are frequent.
21	73	5	23	5.	Most instructors establish course standards that are particularly difficult to attain.
33	57	9	37	6.	High scholarship is a common goal of most students.
53	41	6	56	7.	Open mindedness and objectivity are characteristic of most classes.
59	33	8	64	8.	Many students on this campus are striving for high grades.
68	26	5	73	9.	Considerable out-of-class preparation by students is necessary for most courses.
65	29	7	69	10.	Instructors keep course materials up-to-date and examinations revised.
49	47	5	51	11.	Examinations satisfactorily measure course assignments and presentations.
63	25	12	71	12.	Most instructors here are dedicated teachers.
15	66	20	19	13.	The academic atmosphere on this campus encourages students to go on to graduate work.
29	66	5	30	14.	Instructors generally expect more work than most students are able to accomplish.
50	37	12	58	15.	Curricular offerings are generally considered to be complete enough to satisfy most student program requirements.
30	64	6	31	16.	Course work requires so much time that little is left for other activities.
30	38	32	45	17.	There are adequate seminar, independent study, and field experience courses available to students.
33	50	16	40	18.	Most instructors recognize a superior student and are willing to take extra time to challenge him.
49	34	17	59	19.	There is a good balance between idealism and other points of view in the classroom.
63	32	5	67	20.	It is not difficult to determine the purposes and objectives of most courses.
47	42	11	53	21.	Good teaching is a characteristic of most instructors at this institution.
35	59	6	37	22.	Academic advising is adequate.
61	34	4	64	23.	Most instructors provide ample time for individual consultation.
64	28	8	69	24.	The institution provides a great many academic resources for student use.
42	49	9	46	25.	Ideas and issues brought up in class are often out-of-class discussion topics by students.
					FACILITIES AND SERVICES
68	29	2	71	26.	Most classrooms are not overcrowded.
65	29	5	69	27.	Library resources such as reference books and periodicals are plentiful.
55	20	25	73	28.	Laboratories contain adequate equipment and supplies to carry out assigned work.
56	35	9	61	29.	Recreational facilities are adequate to meet the needs of most students.
79	18	4	82	30.	It is not difficult to find adequate study space on campus.
77	20	4	79	31.	The campus has a very attractive appearance.
80	16	5	84	32.	The books and materials in the library at this institution are organized to provide for ease of location.
75	19	7	80	33.	Custodial services on campus are satisfactory.
76	19	4	80	34.	The library is a good place to study.
50	27	22	65	35.	Rules regulating student conduct in all housing areas are reasonable and fair.
10	55	35	15	36.	Off-campus housing facilities are satisfactory.
47	51	2	49	37.	Enrollment and registration procedures are well organized.
53	19	27	74	38.	Student meeting facilities in the Union or Student Center are sufficient to meet needs.
30	40	31	42	39.	Institution-owned housing facilities are satisfactory.
79	17	4	82	40.	Campus buildings and areas are clearly marked.
36	32	32	53	41.	Facilities such as typing rooms, science labs and shops are generally available to students for individual study.
79	13	8	85	42.	The library staff provides sufficient personal assistance in locating materials in the library.
26	53	21	33	43.	Campus food services are satisfactory.
77	20	3	80	44.	Pedestrian traffic on campus is facilitated by a good network of sidewalks.
15	72	13	17	45.	There is sufficient visitor parking space on campus.
32	48	19	40	46.	Health services on campus are sufficient to meet student needs.
19	59	21	25	47.	Housing costs are reasonable for the facilities and services provided.
21	74	5	22	48.	Current arrangements for buying or renting books and supplies are satisfactory.
35	16	49	68	49.	Personal and Psychological counseling services on campus are satisfactory.
31	44	26	42	50.	There are sufficient opportunities for student employment at the institution.
					CULTURAL CLIMATE
38	27	35	58	51.	Opportunities are provided for students to evaluate works of art.
18	33	49	35	52.	The Artist/Lecture-Concert series are well attended by students.
36	36	29	50	53.	Proper table manners are practiced in the dining halls on campus.
11	67	23	13	54.	Classical music is popular with the majority of students.
43	38	18	53	55.	Students on this campus have an excellent opportunity to gain an appreciation in the fine arts.
16	46	38	26	56.	Live performances of symphonies, ballet, and operas are well patronized by the students.

Agree	Disagree	No Opinion	Agree*		Statement
31	61	8	33	57.	Paintings and other works of art are widely displayed around the campus.
61	28	11	69	58.	Patterns of social behavior on this campus conform favorably to accepted good taste.
66	20	14	76	59.	Dramatic presentations are given frequently on campus.
3	65	32	4	60.	The institution has extensive museum collections.
25	35	39	42	61.	The faculty appears to have a keen interest in the fine arts.
42	36	22	54	62.	Students appear to have an interest in the reading of novels, short stories and poetry.
22	67	11	25	63.	The general campus atmosphere emphasizes "the finer things of life."
56	28	16	67	64.	There is opportunity to study cultures other than our own.
49	38	11	56	65.	There are a variety of performing musical groups on this campus.
37	27	37	57	66.	The film program on this campus has distinct aesthetic values.
11	53	37	17	67.	Speech and forensics has strong emphasis on this campus.
45	23	31	66	68.	There are available to students opportunities for creative expression in the fine arts.
28	32	39	46	69.	The music department has a strong cultural influence.
16	31	53	35	70.	The library of tapes and records, i.e., music, poetry, etc., is used extensively by students.
47	7	45	87	71.	There are some outstanding performing artists on the music faculty.
46	20	33	70	72.	There are several student groups that sponsor events of an aesthetic or cultural nature.
23	59	18	28	73.	Poetry and literature receive much emphasis on this campus.
32	61	7	34	74.	In general the speech and habits of students reflect refinement and good taste.
32	61	9	34	75.	Artists and performing groups appear frequently on campus.
					COMMUNICATIONS
24	70	6	25	76.	It is easy for students to communicate with the administration.
50	45	6	53	77.	The expression of student opinions is encouraged.
75	21	4	78	78.	Instructors are easy to approach with questions concerning classwork.
50	43	7	54	79.	Generally, students feel quite comfortable in approaching instructors regarding a problem.
34	29	37	54	80.	Generally there is a friendly and cooperative relationship between departments.
36	36	27	50	81.	The administration and teaching faculty appear to cooperate well.
36	51	13	42	82.	Faculty members invite informal out-of-class discussions.
22	40	39	36	83.	There is close cooperation between campus student organizations.
47	47	6	50	84.	The student newspaper is a vital communication tool on campus.
59	32	9	65	85.	The student newspaper serves as a sounding board to discuss administrative policies.
56	40	3	59	86.	It is not difficult to find out what is going on around campus.
21	42	38	33	87.	The student-faculty committees on this campus serve as an effective means of communication.
23	48	30	33	88.	The student government is functioning satisfactorily.
45	46	9	49	89.	The student newspaper provides a medium for exchange of intellectual ideas by faculty and students.
49	37	14	57	90.	There is little difficulty experienced by the student in obtaining needed information about the institution.
33	58	8	37	91.	Campus elections are well planned and publicized.
37	30	34	55	92.	The editors of the campus newspaper have a great deal of freedom and latitude.
53	38	8	59	93.	The administration attempts to keep students informed on matters of policy.
75	17	7	81	94.	There is a friendly relationship between faculty and students.
22	60	18	27	95.	Rumors are quickly dispelled on this campus by ready access to facts.
38	51	11	43	96.	It is not hard to get to know instructors outside of class.
49	44	7	53	97.	Students do not seem to be disturbed if they do not know what is going on.
16	61	24	20	98.	Student government is a strong link between faculty and students.
44	39	17	53	99.	The administration informs faculty and students promptly of policy changes.
44	51	5	47	100.	Students keep informed about important campus issues.
					COMMUNITY RELATIONSHIPS
29	45	25	32	101.	There are harmonious relations between college students and non-college youth in this community.
51	43	5	54	102.	The campus atmosphere here makes one feel at home.
40	54	6	42	103.	There is the general feeling that all students are treated alike without preferential treatment of some.
80	17	3	83	104.	Close friendships are easy to cultivate with fellow students.
87	12	2	87	105.	The general atmosphere on campus is friendly.
25	64	11	28	106.	There is strong student loyalty to this institution.
52	36	11	59	107.	The faculty on this campus is considerate and concerned with student problems.
25	61	14	29	108.	Students have little difficulty cashing checks in this community.
26	63	10	29	109.	The merchants in this community treat students like first class citizens.
62	31	7	66	110.	There is a feeling of mutual respect between students and faculty.
63	27	10	70	111.	There are ample opportunities to meet people through social functions and student organizations.
60	33	7	64	112.	Students show a concern for each other at this institution.
23	51	25	32	113.	The police in this town do not discriminate against students.
82	14	3	84	114.	There is a relaxed atmosphere on this campus.
26	42	31	39	115.	Student organizations play an effective role in implementing institutional policies.
48	39	13	55	116.	Social standing at this institution is not dependent upon belonging to the right clubs, organizations or groups.
36	51	13	41	117.	Upper classmen provide helpful leadership to new students.

Agree	Disagree	No Opinion	Agree*		Statement
14	81	5	15	118.	There is considerable interest in student elections on campus.
20	74	5	21	119.	School spirit is an important part of student life on this campus.
33	60	6	36	120.	Students on this campus come from similar social backgrounds.
46	42	13	52	121.	The college community compares favorably with the home community of most students in customs and practices.
54	32	14	63	122.	The faculty as a general rule welcome student appeal for advice and counsel.
46	45	9	51	123.	The students at this institution generally have similar attitudes and goals.
59	31	9	64	124.	Life on campus is generally regarded as a pleasant and rewarding experience.
36	42	21	46	125.	The standards of value held by the community outside the campus are comparable to those held by the institution itself.
					ETHICAL AND MORAL VALUES
37	57	6	39	126.	Students respect institutional rules and regulations.
68	21	11	76	127.	Excessive drinking by students does not create a real problem on this campus.
25	62	12	29	128.	Proper social decorum and good manners are above average on the campus.
54	37	9	59	129.	In general the student body maintains a high standard of conduct.
72	20	8	78	130.	Freedom of speech is an accepted practice on this campus.
47	31	22	60	131.	Cheating and similar forms of dishonesty would result in strict disciplinary measures at this institution.
12	70	17	14	132.	The use of marijuana by students has not become widespread on this campus.
38	46	16	45	133.	The attitudes regarding sex held by a majority of students do not violate the generally accepted rules of good conduct.
38	44	19	47	134.	The moral code of the majority of students is generally above reproach.
57	29	14	66	135.	There is little discrimination as a result of racial prejudice on campus.
66	25	9	72	136.	Institutional regulations do not place undue restraints on social conduct.
53	26	21	66	137.	Cheating on examinations is a minor problem on this campus.
81	12	7	87	138.	Uncontrolled student behavior is not a characteristic of this institution.
38	47	15	45	139.	There is a pronounced atmosphere of honesty and sincerity on this campus.
56	29	16	66	140.	Controversial issues are not denied fair consideration on this campus.
33	52	15	39	141.	There are few students of the "hippie type" on campus.
46	37	17	56	142.	Minority opinion is respected on this campus.
40	49	10	45	143.	There are few cliques and little snobbishness on this campus.
56	28	16	67	144.	Personal conduct is regulated largely by the "honor system."
81	7	11	91	145.	There is no unreasonable exercise of "student power" on this campus.
52	34	13	61	146.	Students are permitted to make many of their own rules of conduct here.
33	37	29	47	147.	The use of hallucinatory drugs by students has not become widespread on this campus.
46	27	26	63	148.	Fraternities and sororities are generally regarded with favor by the institution.
46	35	19	57	149.	High standards of honesty and integrity are set by the example of the faculty.
44	38	19	54	150.	Members of all races participate in all campus activities on an equal basis.

*Percent of agreement based only upon students who expressed an opinion; i.e., agreed or disagreed with a statement. Agree + disagree + no opinion percents do not always add to 100 because of rounding error.

Academic Environment. As already noted, the average score in the Academic Environment area was somewhat lower in 1972 than in 1968. Item data were not available for 1968 so comparisons on particular items could not be made, but a review of Table 7 shows that in 1972 a minority of the students responded in a positive manner to many of the statements in this area of the inventory. Although 65 percent of the respondents (69 percent if those who expressed no opinion are disregarded) agreed that "Instructors keep course materials up-to-date and examinations revised," and 63 percent (71 percent of those who expressed an opinion) that "Most instructors here are dedicated teachers," only about half agreed with statements such as, "There is much more emphasis directed toward understanding than upon memorization of fact in most classes," "Most instructors are very thorough in the teaching of their subject matter," "Open mindedness and objectivity are characteristic of most classes," "Examinations satisfactorily measure course assignments and presentations," and "Good teaching is a characteristic of most instructors at this institution." Only about one-fourth of the students felt that stimulating classroom discussions are frequent. Approximately one-third of the students felt that academic advising is adequate. Somewhat less than half the students thought that sufficient seminar, independent study, and field experience courses are available, and somewhat more than half that curricular offerings are generally adequate to satisfy most students' program requirements.

High standards of scholarship were viewed by a minority of respondents to be characteristic of Northern. Only about a third of the students agreed that, "High scholarship is a goal of most students," and less than a quarter thought that the academic atmosphere encourages students to go on to graduate work.[7] On the other hand, about

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[6] In a related study it was found that the proportion of Northern students who expect to complete a masters or Doctoral degree is slightly below the average in comparison with a national sample of similar institutions. See Hampton, Sandra, Institutional Self Study, Office of Institutional Research, 1972. Whether a larger proportion should aspire to a graduate degree, or should be encouraged to go on to graduate work, is at least in part a matter of conjecture.

60 percent of the students felt that many of the students are striving for high grades.

In general, student responses to the items in this area give the impression that instructors are perceived as dedicated but not outstanding teachers who have relatively modest expectations for their students. Students seem to see most of their fellow students as having rather limited intellectual aspirations, and the general academic atmosphere as reflecting those limited aspirations. A slim majority of the students thought curricular offerings were adequate, and a minority judged academic advising to be adequate.

Facilities and Services. As can be seen from the item responses in the Facilities and Services area reported in Table 7, academic facilities and services such as classrooms, library resources and services, instructional materials, study facilities, and general appearance of the campus were rated favorably by a majority of the students. The availability of facilities such as typing rooms, labs and shops for individual study was considered adequate by half or less of the students, however. A majority of the students were critical of such nonacademic aspects of campus life as housing facilities and costs both on and off campus, food services, parking space, and the bookstore. In a related survey in the fall of 1971, Hefke, Stump, and Busch found that the on-campus living requirement, parking facilities, and residence hall living conditions were among the most frequently reported student concerns.[8] Similar findings from a survey conducted in the spring of 1971 are reported by Hampton.[9]

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[8] Hefke, Norman E., Stump, Ronald J., and Busch, Gerald. An Assessment of Student Attitudes Toward Selected University Policies, Practices, Programs, and Services. Office of the Dean of Students, Northern Michigan University, May, 1972.

[9] Hampton, Sandra, op. cit.

Recreational facilities were considered as adequate by about 60 percent of the students, and almost three-fourths of those who thought they were sufficiently informed to evaluate student meeting facilities agreed that meeting facilities were adequate. Almost half of the respondents expressed no opinion on the counseling services, but about two-thirds of those who did express an opinion, felt that they were satisfactory. Campus health services were seen as sufficient to meet student needs by 40 percent of those who rated the service. Enrollment and registration procedures were seen as being well organized by about half of the respondents.

Generally, academic facilities and services were considered to be adequate by most students. Least satisfaction was expressed with housing, food services, parking, and arrangements for obtaining books and supplies. Other services tended to fall between these high and low points.

Cultural Climate. Most students saw Northern as providing rather limited cultural opportunities. Statements in the inventory concerned with the availability of cultural resources and activities tended to receive positive evaluations from only about one-third of the students. Exceptions to this general trend were those statements concerned with dramatic presentations which 66 percent of the respondents agreed were frequent on campus, and campus museum collections which were understandably seen by almost none of the students as being extensive.

It is of interest to note that a large number of the items concerned with cultural opportunities were rated as "uncertain or do not have adequate information to respond" by a substantial number of students. Thus, in some instances the rather small percentage of students who agreed with a statement was largely accounted for by "no opinion" responses rather than by disagreement with the statement; for example, although only 47 percent of

the respondents agreed with the statement, "There are some outstanding performing artists on the music faculty," this constituted 87 percent of those who felt qualified to express an opinion. In other words, most of the students who did not agree with the statement felt that they did not have adequate information to make a judgment. It seems likely that the high incidence of "no opinion" responses reflects a lack of interest in and familiarity with cultural activities on the Northern campus.

From the responses to inventory items concerned with attendance or other indications of interest in aesthetic and cultural activities, it seems apparent that students do not perceive a very strong interest in cultural activities on campus. Generally, less than a fourth of the students agreed with statements such as, "The Artist/Lecture-Concert series are well attended by students," and "Live performances of symphonies, ballet, and operas are well patronized by the students." Also, only 25 percent (42 percent of those who felt qualified to express an opinion) agreed that "The faculty appears to have a keen interest in the fine arts." The small amount of interest shown in cultural activities is consistent with an earlier study in which Northern students were found to be somewhat below average in cultural sophistication in comparison with a national sample of college students.[10.]

Communications. At least three-fourths of the students felt that instructors are easy to approach with questions concerning classwork and that a friendly relationship exists between faculty and students, even though some aspects of instructional quality as already reported were not highly regarded. More informal communications with the faculty were not, however, seen as readily accomplished; only 35 to 40 percent of the students agreed with the statements: "Faculty members invite informal out-of-class discussions" and "It is not hard to get to know instructors outside of class." Only about

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10. Stordahl, K., Student Values, Office of Institutional Research, 1970.

25 percent thought that it is easy for students to communicate with the administration, and a little more than half agreed that the administration keeps faculty and students informed about policy matters.

Students appear to feel that various groups within the University do not have good working relationships with one another. Less than 40 percent of the students (50 percent of those who expressed an opinion) agreed that the administration and teaching faculty appear to cooperate well, and less than 35 percent (54 percent of those who expressed an opinion) felt that a friendly and cooperative relationship exists between departments. Only a fourth to a third thought that there was close cooperation among student organizations on campus. Communications instrumentalities such as the student newspaper, student-faculty committees, and student government were also seen as rather ineffective means of communication. About half of the students felt that expression of student opinions is encouraged.

In summary, students seemed to view communications between students and faculty as being fairly good but were not very sanguine about most other avenues of communication on the campus. Communications between various groups such as academic departments, student organizations, faculty and administration, students and administration, etc. were not seen as functioning very satisfactorily. Similarly, channels of communication such as the student newspaper, student-faculty committees, and student government were seen as relatively ineffective mediums of exchange.

Community Relationship. Personal relationships within the confines of the campus were seen as being substantially better than relationships with the surrounding community. More than 80 percent of the students agreed that the campus has a friendly, relaxed atmosphere and that friendships with fellow students are easy to cultivate. Positive reactions

to student-faculty relationships were expressed by a smaller number of respondents--about one-half to two-thirds. In contrast, only a small portion of the students felt that there were good relationships between students and the surrounding community. Illustrative of this feeling is that fact that only one-fourth to one-third of the students agreed with the following statements: "The police in this town do not discriminate against students," "The merchants in this community treat students like first class citizens," and "Students have little difficulty in cashing checks in this community."

Although the campus was seen as having a generally friendly atmosphere, only a small portion of the students seemed to sense any substantial student loyalty to Northern. Only about one-fourth of the students agreed with the statement that "There is strong student loyalty to this institution," and even fewer felt that school spirit was important or that there was a strong interest expressed in student elections.

Ethical and Moral Values. The majority of students tended to see their fellow students as quite self-controlled and not prone to engage in unrestrained behavior on campus. Similarly, a majority agreed that the University does not place undue restraints on student behavior. On the other hand, a substantial number of the respondents apparently felt that high standards of honesty, integrity, and morality are not characteristic of the University community. Less than half of the respondents agreed with statements such as: "Students respect institutional rules and regulations," "The attitudes regarding sex held by a majority of students do not violate the generally accepted rules of good conduct," "The moral code of the majority of students is generally above reproach," and "There is a pronounced atmosphere of honesty and sincerity on this campus." Racial prejudice was seen by some students as a serious problem, and only about half of the students agreed that "High standards of honesty and integrity are set by the example of the faculty."

Although two-thirds of the students felt that excessive drinking did not create a problem on campus, only 12 percent agreed with the statement that "The use of marijuana by students has not become widespread on this campus" and 33 percent with the statement "The use of hallucinatory drugs by students has not become widespread on this campus."

SUMMARY

Students' perceptions of the quality of six characteristics of the environment at Northern Michigan University were assessed in 1968 and 1972. The characteristics were: the academic environment, facilities and services, cultural climate, communications, community relationships, and ethical and moral values. Northern students' evaluation of these aspects of the campus environment in 1972 were compared with students' reactions in 1968.

On the average, Northern students expressed somewhat more positive views toward three aspects of the campus environment in 1972 than in 1968: facilities and services, cultural climate, and community relationships. Somewhat less positive views were expressed in 1972 than in 1968 towards the academic environment, adequacy of communications, and ethical and moral values of the campus community. In all instances, differences between 1968 and 1972 were quite small.

Based on the 1972 survey, freshmen expressed the most favorable reactions to Northern and juniors the least favorable. Women expressed somewhat more positive views than did men towards the quality of the cultural climate, adequacy of communications and community relationships; the evaluations of men and women of other characteristics of the campus environment were very similar. Students who lived off campus tended to hold slightly more positive views of the University than did those who lived in residence halls,

except in the communications area. Students who lived in residence halls felt that campus communications were slightly more effective than did students living off campus.

Students seemed to view most of the Northern faculty as being dedicated but not outstanding teachers who have quite modest expectations for their students. They tended to see their fellow students as having little interest in scholarly and cultural pursuits, and the general academic atmosphere of the University as not strongly conducive to intellectual and cultural development.

Academic facilities and services were considered by most students to be quite adequate. They were considerably less optimistic, however, about such nonacademic aspects of campus living as housing, food services, parking facilities, and arrangements for the purchase of books and supplies.

Communications between faculty and students were seen as being fairly good but communications between administration and students were thought to be less adequate. Various groups within the University such as faculty, administration, academic departments, and student organizations were perceived as having inadequate working relationships with one another. Communications tools such as the student newspaper, student-faculty committees, and student government were also seen as ineffective avenues of interchange.

Personal relationships within the campus community were considered to be much better than relationships with the surrounding community. The campus was seen as having a generally friendly atmosphere, but most respondents felt that the Marquette community discriminates against students in a variety of ways. They seem to feel that students are treated as "second-class citizens" by local police as well as by most local business establishments.

Ethical and moral standards and conduct of the campus community were judged to deviate from traditional middle-class values. The use of drugs was thought to be quite widespread. Racial discrimination was seen as a problem by a significant minority of the students. A majority of the students agreed, however, that unrestrained behavior is not characteristic of Northern students and that institutional rules and regulations do not place undue restraints on student conduct.

In attempting to evaluate the practical significance of this study or possible implications of the findings for action, the reader should keep in mind that the study was based on the perceptions of students rather than upon objective measures of University quality. On the other hand, a student's subjective interpretation of the University environment is no doubt a significant influence upon his behavior.

APPENDIX

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MEMBERSHIP OF 1968 STUDY COMMITTEE

Dr. William H. Clements, Director of Institutional Research, Wisconsin State University, Stevens Point, Wisconsin, Chairman

Dr. Gerald D. Bisbey, Associate in Research, University of Northern Iowa, Cedar Falls, Iowa

Dr. Charles W. Brim, Planning Director for Board of Regents, State of Illinois, Springfield, Illinois

Dr. Morton D. Dunham, Director of Student Affairs Research, Ball State University, Muncie, Indiana

Dr. Lowell Kafer, Associate Dean of Students, Northern Michigan University, Marquette, Michigan

Dr. Arthur F. Miller, Coordinator, Counseling Service, Kansas State Teachers College, Emporia, Kansas

Dr. Dwain F. Petersen, Director of Research, Mankato State College, Mankato, Minnesota

Dr. H. M. Silvey, Director of Research, University of Northern Iowa, Cedar Falls, Iowa, Director of the Study

Dr. Herman Tiedeman, Director of Test Service, Illinois State University, Normal, Illinois

Dr. Samuel E. Turner, Director of Institutional Planning and Development, Western Illinois University, Macomb, Illinois

Analysis of Variance Tables

The analysis of variance tables were reproduced directly from computer printouts. As may be noted from the table headings a constant of 100 was added to each students weighted average score prior to analysis to eliminate negative values; negative values occurred since the item weights ranged from -100 to +100. The addition of the constant has no effect upon the F value. The two digit number to the right of the SS, MS, and F values in each table indicates the correct position of the decimal point. If the two digit number is positive the decimal is to be moved that number of places to the right; if it is negative the decimal is to be moved to the left, and if the number is 00 the decimal is correctly positioned as printed.

K403 - THREE-WAY ANALYSIS OF VARIANCE (UNBIASED) PROBLEM 1

** 09/28/72 **********

1. ACADEMIC ENVIRONMENT
A=CLASS, B=SEX(1=MEN, 2=WOMEN), C=RESIDENCE(1=DORM, 2=NOT IN DORM)
(100 ADDED TO EACH STUDENT'S SCORE TO ELIMINATE NEGATIVE VALUES)

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TABLE OF ANALYSIS OF VARIANCE

SOURCE	SS	DF	MS	F
RAW SS	0.5416632E 07			
MEAN SS	0.5159065E 07			
A	0.1279800E 05	3	0.4266000E 04	0.9618553E 01
B	0.6760000E 03	1	0.6760000E 03	0.1524178E 01
C	0.1100000E 03	1	0.1100000E 03	0.2480171E 00
A*B	0.3491000E 04	3	0.1163667E 04	0.2623719E 01
A*C	0.5525000E 04	3	0.1841667E 04	0.4152407E 01
B*C	0.1257000E 04	1	0.1257000E 04	0.2834159E 01
A*B*C	-0.2400000E 02	3	-0.8000000E 01	-0.1803761E-01
ERROR	0.2337340E 06	527	0.4435178E 03	
TOTAL	0.2575670E 06	542	0.4752158E 03	

K403 - THREE-WAY ANALYSIS OF VARIANCE (UNBIASED) PROBLEM 2

** 09/28/72 **********

2. FACILITIES AND SERVICES
A=CLASS, B=SEX(1=MEN, 2=WOMEN), C=RESIDENCE(1=DORM, 2=NOT IN DORM)
(100 ADDED TO EACH STUDENT'S SCORE TO ELIMINATE NEGATIVE VALUES)

****

TABLE OF ANALYSIS OF VARIANCE

SOURCE	SS	DF	MS	F
RAW SS	0.6336980E 07			
MEAN SS	0.6059666E 07			
A	0.8317000E 04	3	0.2772333E 04	0.5532049E 01
B	0.3850000E 03	1	0.3850000E 03	0.7682478E 00
C	0.6040000E 03	1	0.6040000E 03	0.1205251E 01
A*B	0.6410000E 03	3	0.2136667E 03	0.4263608E 00
A*C	0.2307000E 04	3	0.7690000E 03	0.1534500E 01
B*C	-0.1110000E 03	1	-0.1110000E 03	-0.2214949E 00
A*B*C	0.1070000E 04	3	0.3566665E 03	0.7117097E 00
ERROR	0.2641010E 06	527	0.5011404E 03	
TOTAL	0.2773140E 06	542	0.5116494E 03	

K403 - THREE-WAY ANALYSIS OF VARIANCE (UNBIASED) PROBLEM 3

** 08/28/72 **********

3. CULTURAL CLIMATE
A=CLASS, B=SEX(1=MEN, 2=WOMEN), C=RESIDENCE(1=DORM, 2=NOT IN DORM)
(100 ADDED TO EACH STUDENT'S SCORE TO ELIMINATE NEGATIVE VALUES)

****

TABLE OF ANALYSIS OF VARIANCE

SOURCE	SS	DF	MS	F
RAW SS	0.4908072E 07			
MEAN SS	0.4627654E 07			
A	0.8423000E 04	3	0.2807667E 04	0.5765049E 01
B	0.2799000E 04	1	0.2799000E 04	0.5747254E 01
C	0.1680000E 04	1	0.1680000E 04	0.3449584E 01
A*B	0.7420000E 03	3	0.2473333E 03	0.5078555E 00
A*C	0.4001000E 04	3	0.1333667E 04	0.2738449E 01
B*C	0.1970000E 04	1	0.1970000E 04	0.4045049E 01
A*B*C	0.4146000E 04	3	0.1382000E 04	0.2837693E 01
ERROR	0.2566570E 06	527	0.4870151E 03	
TOTAL	0.2804180E 06	542	0.5173762E 03	

K403 - THREE-WAY ANALYSIS OF VARIANCE (UNBIASED) PROBLEM 4

*** 08/28/72 **********

4. COMMUNICATIONS
A=CLASS, B=SEX(1=MEN, 2=WOMEN), C=RESIDENCE(1=DORM, 2=NOT IN DORM)
(100 ADDED TO EACH STUDENT'S SCORE TO ELIMINATE NEGATIVE VALUES)

****

TABLE OF ANALYSIS OF VARIANCE

SOURCE	SS	DF	MS	F
RAW SS	0.5292696E 07			
MEAN SS	0.4890509E 07			
A	0.2537400E 05	3	0.8458000E 04	0.1214396E 02
B	0.3468000E 04	1	0.3468000E 04	0.4979339E 01
C	0.5900000E 02	1	0.5900000E 02	0.8471191E-01
A*B	0.3130000E 03	3	0.1043333E 03	0.1498013E 00
A*C	0.1496000E 04	3	0.4986665E 03	0.7159831E 00
B*C	0.2799000E 04	1	0.2799000E 04	0.4018791E 01
A*B*C	0.1634000E 04	3	0.5446665E 03	0.7820297E 00
ERROR	0.3670440E 06	527	0.6964780E 03	
TOTAL	0.4021870E 06	542	0.7420422E 03	

K403 - THREE-WAY ANALYSIS OF VARIANCE (UNBIASED) PROBLEM 5

*** 08/28/72 **********

5. COMMUNITY RELATIONSHIPS
A=CLASS, B=SEX(1=MEN, 2=WOMEN), C=RESIDENCE(1=DORM, 2=NOT IN DORM)
(100 ADDED TO EACH STUDENT'S SCORE TO ELIMINATE NEGATIVE VALUES)

****

TABLE OF ANALYSIS OF VARIANCE

SOURCE	SS	DF	MS	F
RAW SS	0.5392172E 07			
MEAN SS	0.5033899E 07			
A	0.2158100E 05	3	0.7193664E 04	0.1155410E 02
B	0.2663000E 04	1	0.2663000E 04	0.4277175E 01
C	0.9000000E 01	1	0.9000000E 01	0.1445534E-01
A*B	0.1461000E 04	3	0.4870000E 03	0.7821946E 00
A*C	0.1905000E 04	3	0.6350000E 03	0.1019904E 01
B*C	0.3090000E 03	1	0.3090000E 03	0.4963000E 00
A*B*C	0.2231000E 04	3	0.7436665E 03	0.1194439E 01
ERROR	0.3281140E 06	527	0.6226072E 03	
TOTAL	0.3582730E 06	542	0.6610203E 03	

K403 - THREE-WAY ANALYSIS OF VARIANCE (UNBIASED) PROBLEM 6

*** 08/28/72 **********

6. ETHICAL AND MORAL VALUES
A=CLASS, B=SEX(1=MEN, 2=WOMEN), C=RESIDENCE(1=DORM, 2=NOT IN DORM)
(100 ADDED TO EACH STUDENT'S SCORE TO ELIMINATE NEGATIVE VALUES)

****

TABLE OF ANALYSIS OF VARIANCE

SOURCE	SS	DF	MS	F
RAW SS	0.6195488E 07			
MEAN SS	0.5892238E 07			
A	0.1026900E 05	3	0.3423000E 04	0.6296124E 01
B	0.2350000E 03	1	0.2350000E 03	0.4322493E 00
C	0.1100000E 04	1	0.1100000E 04	0.2023294E 01
A*B	0.2719000E 04	3	0.9063333E 03	0.1667071E 01
A*C	0.2605000E 04	3	0.8683333E 03	0.1597176E 01
B*C	-0.1600000E 03	1	-0.1600000E 03	-0.2942974E 00
A*B*C	-0.3100000E 02	3	-0.1033333E 02	-0.1900670E-01
ERROR	0.2865130E 06	527	0.5436677E 03	
TOTAL	0.3032500E 06	542	0.5595017E 03	